From: Turner_Philip
To: Shewmake_Kenneth; Khoury_Ghassan; Rauscher_Jon
Cc: Mueller_Brian; Villarreal_Chris
Subject: RE: Need some HHRA advice and everyone is out or working flexiplace.
Date: Friday, June 06, 2014 2:51:41 PM
Attachments: image004.png

There isn't really (yet) an equivalent way of documenting this. HHRA does not officially have SMDPs, although, the "Science and Decisions" document by the National Academies recommended this for HHRA... just like they recommended HHRA have a formal Problem Formulation (like eco). Despite this, it still seems imperative to document the evidence and decision. Any of your three listed options would work, but it would be my preference to write a separate memo which then references the actuall HHRA.

Those are just my thoughts...

Phil

From: Shewmake, Kenneth
Sent: Friday, June 6, 2014 2:40 PM
To: Khoury, Ghassan; Rauscher, Jon; Turner, Philip
Cc: Mueller, Brian
Subject: Need some HHRA advice and everyone is out or working flexiplace.

To any risk assessors working flexiplace who would like to offer an opinion on a HHRA question.

I am working on Falcon Refinery. The PRP claims that they do not have money to continue the cleanup without a loan and they want to use the barge dock portion of the site (AOC-4) as collateral for a loan. The bank will not loan money without assurances that this portion of the site will not require remediation. This area is being evaluated as a separate AOC and the risk assessment for this AOC has been completed. I wrote a draft SMDP memo documenting the decision on eco risk. It is attached if you would like to see it.

Here is my question. Is there an equivalent way of documenting a decision for the HHRA? We need to do this quickly if the loan is going to go through, so we need to produce something documenting a decision before producing a ROD for the rest of the site.
I think the options are the following.

1. Add a paragraph or 2 to the SMDP memo discussing the results of the HHRA.
2. Produce a separate memo for HHRA.
3. Use the Risk assessment as a way of documenting the decision.

I have copied and pasted the last page of the HHRA report for AOC4. I think it is a good summary and I would use it almost as is if I need to write a memo for the HHRA. The site is an industrial area. Future use of the site is expected to remain industrial. The community is on city water and the closest private well is about ½ mile away.

Human Health Risk Assessment Summary of Results

Receptor	Media	Carcinogenic Risks[1]	Non-Carcinogenic Hazards	COPC Contributing Significantly to Results
AOC-4				
Surface Soil				
Child Resident[1]	Surface Soil	5×10^{-5}	2	Not Applicable
Adult Resident[1]	Surface Soil	5×10^{-5}	0.2	Not Applicable
Construction Worker	Surface soil	6×10^{-7}	0.6	Not Applicable
Subsurface Soil				
Child Resident[1]	Subsurface Soil	2×10^{-5}	0.3	Not Applicable
Adult Resident[1]	Subsurface Soil	2×10^{-5}	0.04	Not Applicable
Construction Worker	Subsurface soil	2×10^{-7}	0.08	Not Applicable
1 Cancer risk for the resident adult and child is presented as a total lifetime cumulative cancer risk.				

[redacted]o have relatively low contact with the area. The residential and construction worker exposure scenario represents conservative exposure scenarios that would account for all other expected receptor contact with the site. Media of concern for AOC-4 include surface soil, subsurface soil, and ground water. Only one ground water sample was collected within AOC-4. As a result, ground water was evaluated qualitatively. Specific exposure pathways evaluated in the AOC-4 HHRA are presented in Figure 4.

The following table presents a summary of the HHRA results. The results indicate that there are no human health concerns for exposure to AOC-4. The HHRA only evaluated potential resident adult and child exposure and construction worker exposure to soil in AOC-4. Other potential receptors may contact these media. These receptors include landscapers/maintenance workers and trespassers. These workers and trespassers would be expected to visit the site infrequently at contact rates lower than the resident or construction worker. The evaluation of a residential and construction worker exposure represents a receptor that is expected to have higher contact with these media. Therefore, the conclusion that there are no human health concerns for residential or construction worker exposure also applies to any other receptors who may visit AOC-4. Ground water was evaluated qualitatively because only one sample result is available for AOC-4. The maximum detected concentration of dissolved arsenic (60.8 μg/L) exceeds both the arsenic tap water RSL (0.045 μg/L) and the MCL (10 μg/L). The maximum detected arsenic concentration is approximately three orders of magnitude higher than the tap water RSL, which would result in carcinogenic risk levels above the EPA acceptable risk range. However, one sample result is not representative of typical exposure to ground water as a tap water source. In conclusion, the HHRA did not reveal potential concerns for human health exposure at AOC-4.

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